



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,361	11/13/2001	Michael L. Denby	4045-A3	4859

7590 11/21/2003

Michael W. Goltry  
PARSONS & GOLTRY  
Suite 260  
340 East Palm Lane  
Phoenix, AZ 85004

EXAMINER
WALSH, JOHN B
ART UNIT
PAPER NUMBER

3676

DATE MAILED: 11/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES PATENT AND TRADEMARK OFFICE

---

COMMISSIONER FOR PATENTS  
UNITED STATES PATENT AND TRADEMARK OFFICE  
P.O. Box 1450  
ALEXANDRIA, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 13

Application Number: 10/010,361  
Filing Date: November 13, 2001  
Appellant(s): DENBY, MICHAEL L.

---

Michael L. Denby  
For Appellant

**EXAMINER'S ANSWER**

MAILED

NOV 21 2003

GROUP 3800

This is in response to the appeal brief filed September 15, 2003.

Art Unit: 3676

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

The brief does not contain a statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief. Therefore, it is presumed that there are none. The Board, however, may exercise its discretion to require an explicit statement as to the existence of any related appeals and interferences.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

No amendment after final has been filed.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is correct.

**(7) *Grouping of Claims***

The rejection of claims 20-38 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

**(8) *Claims Appealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

Art Unit: 3676

**(9) Prior Art of Record**

5,875,662	Denby et al.	03-1999
2,720,804	Brown	10-1955

**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 20-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,878,662 to Denby et al. in view of U.S. Patent No. 2,720,804 to Brown.

The examiner's rejection includes the following findings of facts.

Denby et al. '662 disclose a handle (52) having a key (54); a piston (64) having a bore (88); a cam (74) having first and second ends held by a cap (66) for rotation in the bore (88), one of the first and second ends having a keyway (78) capable of receiving the key (54).

As concerns claims 21, 27, 33 and 37, the keyway is disposed off center of the cam (column 3, line 59).

As concerns claims 22 and 28, the piston is attached to a removable part of a bicycle (column 3, line 46; axle is removable from the bicycle).

As concerns claims 23 and 29, the piston is attached to a hub (14).

As concerns claims 24, 30 and 34, the hub is attached to a wheel (figure 1).

As concerns claims 25, 31, 35 and 38, the hub is attached to a bicycle frame (figure 1, attached to fork 12).

As concerns claims 32 and 36, a handle (52) having a key (54); a piston (64) attached to an axle (57; column 3, line 46) mounted to a hub (14) attached to a bicycle wheel (figure 1), the piston having a bore (88); a cam (74) having a keyway (78), said cam held by a cap (66).

Art Unit: 3676

Denby et al. '662 fail to teach a magnetic attraction/engagement between the cam and key.

Brown '804 teaches a magnetic attraction/engagement between a recess on one element and a key/tool (column 2, lines 28-33; column 3, lines 40-42).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the key and cam of Denby et al. '662 with a magnetic attraction/engagement between the two elements, as taught by Brown '804, in order to better retain the two elements in engagement.

**(11) *Response to Argument***

The Appellant argues "There is no teaching or suggestion in Denby et al. of the desirability of incorporating magnetic attraction/engagement between its key and cam" (page 4, paragraph 3, lines 5-7). The examiner agrees. However, the teaching of the desirability of incorporating magnetic attraction/engagement is provided by Brown, Denby et al. discloses all of the other claimed limitations.

The Appellant argues "There is no teaching or suggestion in Brown of the desirability of incorporating magnetic/attraction engagement between a key and cam of an assembly" (page 4, paragraph 3, lines 7-8) and "...does not make it obvious in connection with applicant's claimed invention without some teaching or motivation in the art explaining the desirability of providing magnetic attraction/engagement between applicant's claimed key and cam". (page 5, paragraph 1, lines 5-8). The Examiner disagrees with the Appellant, since Brown teaches "magnetic tools of the general type which utilize magnetic force for holding a member or work piece such as screws, bolts, nuts and the like, in place thereon to facilitate the placing for the member in a position to be driven" (Brown; column 1, lines 15-19) and "magnetic tool structure capable of

Art Unit: 3676

magnetically retaining a member thereon to facilitate application of the member to a cooperating part and to drive the member into final set position” (Brown; column 1, lines 60-63). Brown teaches that the desirability of the magnetic tool structure is to hold one member in engagement relative to another member. This teaching is relevant since the Appellant’s key is a tool used on a member, such as the cam. Furthermore, Brown discloses “While the device of the present invention may also be used to hold any desired implement, work piece, or member adapted to be driven”(Brown; column 1, lines 40-42) and “the broad application of the invention, the particular member received by the socket is immaterial. It may be a nut, screw, bolt or driving implement such as a bit”(Brown; column 2, lines 30-33). This disclosure sets forth that the magnetic tool taught by Brown is not narrowly limited solely to Brown’s claimed invention, rather the teaching is relevant to all types of implements, which one of ordinary skill in the art would consider when solving the particular problem of retaining one member in relation to another, and in particular, a driving and a driven member. In the instant application, appellant is claiming a driving and a driven member. The key is the driving member and the piston is the driven member.

The Appellant argues “If there is a teaching or suggestion to combine the teachings of Denby et al. with Brown, it comes from applicant’s patent application and not from the prior art”. (page 5, paragraph 2, lines 3-4). In response to Appellant's argument that the Examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. In re McLaughlin, 443 F.2d 1392; 170 USPQ 209 (CCPA 1971). In this instance, the reference of Brown provides

Art Unit: 3676

the motivation to combine. Brown states “magnetic tool structure capable of magnetically retaining a member thereon to facilitate application of the member to a cooperating part and to drive the member into final set position” (column 1, lines 60-63). This provides the teaching that magnetic attraction/engagement between two elements provides for retaining a member to a cooperating part.

The Appellant argues “there is no teaching in either reference of where to incorporate a magnetic attraction”. (page 5, paragraph 2, lines 6-7). In response to Appellant's argument that there is no teaching in either reference of where to incorporate a magnetic attraction, it has been held that the test for obviousness is not whether the features of one reference may be bodily incorporated into the other to produce the claimed subject matter but simply what the combination of references makes obvious to one of ordinary skill in the pertinent art. In re Bozek, 163 USPQ 545 (CCPA 1969). The teaching of where to incorporate a magnetic attraction is provided by Brown at column 1, lines 65-70 (“wherein a permanent magnet...is retained in the bore”). This disclosure provides the teaching of incorporating the magnetic attraction in a bore and one of ordinary skill in the art would find it obvious that the bore structure of Brown serves as a keyway. Furthermore, it appears from the appellant's specification the placement of the magnet is arbitrary, since it need not be at one specific location wherein the magnet may be placed on the key or cam or on both the key and cam (appellant's specification; page 5, lines 11-15).

The Appellant argues “Examiner...appears to be working from personal knowledge” with regard to the statement, it would have been obvious to provide the key and cam of Denby et al. '662 with a magnetic attraction/engagement between the two elements, as taught by Brown '804, in order to better retain the two elements in engagement. The Examiner disagrees with the

Art Unit: 3676

Appellant because the motivation and suggestion for providing magnetic attraction/engagement are taught by Brown, not from the Examiner's personal knowledge. Brown states "magnetic tool structure capable of magnetically retaining a member thereon to facilitate application of the member to a cooperating part and to drive the member into final set position" (column 1, lines 60-63). One of ordinary skill in the art when faced with the problem of retaining two members would be led naturally to the teaching of Brown who teaches magnetic attraction/engagement provides for better cooperation between two members.

The Appellant's central argument is that it would not have been obvious to provide Denby et al. with magnetic engagement/attraction in view of Brown. The determination of obviousness is based upon whether a hypothetical person with ordinary skill and knowledge in the art to which the invention pertains with full knowledge of all of the pertinent prior art, when faced with the problem to which the claimed invention is addressed, would be led naturally to the solution adopted in the claimed invention or at least would naturally view that solution as an available alternative. The viewpoint of one of skilled in the art when determining obviousness not only encompasses the knowledge that the person of skill would likely possess, but also encompasses information disclosed in the references that the person would have available for consultation when confronted with the problem that the claimed invention addresses. (*See, e.g. Tveter v. AB Turn-O-Matic*, 633 F.2d 831, 834, 209 USPQ 22, 25 (9<sup>th</sup> Cir. 1980); *Custom Accessories, Inc. v. Jefferey-Allan Indus., Inc.* 807 F.2d 955, 962, 1 USPQ2d 1196,1201 (Fed. Cir. 1986)). In the instant case, the problem to be solved is engagement between two parts, a key and a cam, specifically magnetic attraction for engagement between the two parts. One of ordinary skill in the art when faced with this problem would naturally be led to Brown '804 for

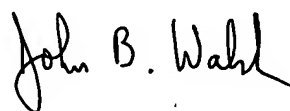


Art Unit: 3676

teaching magnetic attraction to be used for engaging one element with another (see Brown; column 1, lines 60-63; column 1, lines 15-19).

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

A handwritten signature in black ink that reads "John B. Wahl". The signature is written in a cursive style with a large, stylized "J" and "W".

JBW  
November 20, 2003

Conferees  
Anthony Knight  
Tom Will

Michael W. Goltry  
PARSONS & GOLTRY  
Suite 260  
340 East Palm Lane  
Phoenix, AZ 85004